

# Legislative Analysis



## ELIMINATE REQUIREMENT FOR SECONDARY LINER AND LEACHATE COLLECTION SYSTEM FOR RDDP

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**House Bill 4875 as reported without amendment**

**Sponsor: Rep. Andrea LaFontaine**

**Committee: Natural Resources, Tourism, and Outdoor Recreation**

**First Analysis: 10-10-11**

*(Enacted as Public Act 215 of 2011)*

### ***BRIEF SUMMARY:***

The bill would amend Part 115 (Solid Waste Management) of the Natural Resources and Environmental Protection Act (NREPA) to eliminate the provision that requires landfill research, development, and demonstration projects (RDDP) to have a secondary liner and leachate collection system.

### ***FISCAL IMPACT:***

House Bill 4875 would have no fiscal impact on the State of Michigan or local units of government.

### ***THE APPARENT PROBLEM:***

In 2004 the U.S. Environmental Protection Agency issued final regulations (40 CFR 258.4) permitting states to issue research, development, and demonstration permits (RDDP) for municipal solid waste landfills. Public Acts 199, 236, and 243 of 2005 allowed the establishment of RDDP's in Michigan. The regulations permit states to allow variances from certain requirements related to the operation of municipal solid waste landfills (including restrictions on the types of liquids that may be placed in a landfill) for landfills utilizing new or innovative methods in the disposal of solid waste. One type of permitted project is the construction of a bioreactor landfill, which is a type of landfill where air or liquid (in this case, septage waste) is injected into the waste mass to accelerate degradation and biostabilization. In 2007, the Department of Environmental Quality issued a RDDP permit to the Smiths Creek landfill in St. Clair County authorizing the placement of liquid septage in the landfill to accomplish three objectives: (1) divert septage from possible land application, (2) demonstrate that traditional design and controls are suitable for use with bioreactor landfill technology, and (3) enhance energy production potential by increasing gas production rates.

As part of the requirement under the program, RDDP sites are required to be equipped with a secondary liner and leachate collection system, even though federal standards only require a single liner to be installed. Smiths Creek is said to have a sufficient amount of clay underneath the landfill that a secondary liner provides only negligible protection beyond a traditional single liner design. Eliminating the secondary liner requirement will allow new RDDP sites to reduce construction costs of new facilities and make it possible for existing solid waste landfills to take advantage of bioreactor technology. Solid waste landfills are only required to be constructed with a single liner system, and for logistical and cost reasons,

it is impossible for an existing landfill to participate in the program because of the secondary liner requirement. Expanding the use of bioreactor landfills may provide an alternative method for the safe and proper disposal of septage waste.

***THE CONTENT OF THE BILL:***

The bill would amend Part 115 (Solid Waste Management) of the Natural Resources and Environmental Protection Act (NREPA) to eliminate the provision that requires landfill research, development and demonstration projects (RDDP) to have a secondary liner and leachate collection system.

Part 115 defines RDDP to mean a research, development, and demonstration project for a new or existing type II landfill unit, or for a lateral expansion of such a unit. (A type II landfill unit accepts municipal solid waste.) A person may submit to the Department of Environmental Quality (DEQ) a project abstract for a RDDP. If the DEQ director determines the RDDP will provide beneficial data on alternative landfill design, construction, or operating methods, the person may apply for a construction permit authorizing the establishment of the RDDP.

Under the act, a RDDP is required to include a secondary liner and leachate collection system to monitor the effectiveness of the primary liner. House Bill 4875 would delete this requirement.

[House Bill 4875 is identical to Senate Bill 473, which was passed by the Senate on September 15, 2011.]

MCL 324.11511 and 11511b

***ARGUMENTS:***

***For:***

Eliminating the double liner and leach collection system requirement for RDDP sites would make it possible for more landfills to take advantage of bioreactor technology. As noted during committee testimony, the ground composition at the Smiths Creek landfill is such that a secondary liner is thought to be unnecessary and it does not appear to provide much added environmental protection. For obvious reasons, the requirement for a secondary liner prevents any currently operating solid waste landfills with a single liner from being able to use this technology. Expanding bioreactor technology to other landfills could provide communities with new options for disposing of septage waste.

Eliminating the secondary liner requirement and bringing more landfills into the program would appear to increase the production of methane gas, which is used as a biofuel. The production increase could allow local communities to generate their own energy or put it back into the power grid. According to CTI, the company responsible for the RDDP's design, construction, and management, the project occupies less than 10% of the landfill but produces roughly 40% of the landfill's gas. CTI estimates the gas produced in the landfill generates enough energy to power 1,900 homes. The RDDP also receives more than 600,000 gallons of septage waste every year.

Michigan's requirement for a secondary liner exceeds federal regulations for this type of project. At the programs' inception it made sense to require a second liner because it was not known how a single liner would reach to the introduction of liquids. Now that significant time has passed and a single liner has proven to be an effective barrier, the need for a secondary liner appears to be unnecessary.

***Against:***

There was concern expressed during committee deliberations about the potential long-term costs associated with landfills that may leak after closure. An example was given during committee testimony of the South Macomb Disposal Authority (SDMA) Landfill sites 9 and 9a. According to the DEQ, the site was utilized for the disposal of municipal waste from 1968 to 1975. SDMA discontinued use of the site in 1975 when it was discovered leachate was being discharged from the landfill into a nearby drain. The site was eventually placed on the Superfund National Priorities List by the Environmental Protection Agency in 1986. Numerous lawsuits have been filed over cleanup responsibility and cost. Committee testimony said that the liability of the SDMA, and ultimately the jurisdictions that make up the authority, is upwards of \$99 million. It is possible that injecting liquid septage into a landfill that does not have the double liner as recommended may pose an increased risk of post-closure leakage. Potential costs of such a leakage could seriously threaten the financial stability of a community.

Michigan's requirement for a double liner was established because of past experiences with leaking landfills. Some would argue there is not enough information to justify eliminating the requirement for a secondary liner. Even though the cost of a second liner may be expensive, the costs associated with contaminating water sources and jeopardizing public health could be much greater. Even though the Smiths Creek landfill is the only permitted bioreactor RDDP, this bill would apply to any similar projects moving forward.

Some have expressed concern there has not been time to collect sufficient data on the Smiths Creek landfill to evaluate the overall impact of the RDDP program. They point to the fact the Smiths Creek bioreactor has only been in operation since 2007. While they do not necessarily oppose the project, or the potential expansion, they want more time to review relevant data before expanding to other landfills.

***POSITIONS:***

The Michigan Department of Environmental Quality supports the bill. (9-20-11)

A representative from CTI and Associates, Inc. testified in support of the bill. (9-20-11)

The Michigan Environmental Council opposes the bill. (9-20-11)

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■ This analysis was prepared by nonpartisan House staff for use by House members in their deliberations, and does not constitute an official statement of legislative intent.